

REMARKS

Claims 1-20 are pending in the application.

Claims 3, 4 and 7 are indicated as allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 1, 2, 5-6, 8-13, 15-20 stand rejected under 35 U.S.C. 102(e).

Claim 14 stands rejected under 35 U.S.C. 103(a).

New claims 21-26 are added.

No new matter is added.

Claims 1-26 remain in the case for reconsideration.

Applicant requests reconsideration and allowance of the claims in light of the following amendment and remarks.

Claim Rejections – 35 USC § 102

Claims 1, 2-6, 8-13, 15-20 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,335,279 B2 to Jung et al ("Jung").

The rejection is respectfully traversed.

In the claimed invention, as recited in claim 1, a liner is selectively deposited over the gate stack such that the liner is deposited on the capping nitride layer at a rate *lower than the rate of deposition on the conductive layer*. Thus, the liner is thinner on the capping nitride layer than on the conductive layer. See page 3, line 28-page 4, line 9.

The Examiner has argued that "Jung teaches selectively depositing a liner 140 over the gate stacks, so that the liner is thicker on the conductive layer than on the capping nitride layer."

Jung, however, merely teaches depositing a *conformal* second insulating layer 126 and another *conformal* third insulating layer 128, which are anisotropically etched to form third spacers 140 on the sidewalls of the gate electrodes." See FIG. 3L and col. 9, lines 12-20 of the Jung patent.

Therefore, nothing in Jung teaches or discloses selective deposition of a liner ...on the capping nitride layer *at a rate lower than the rate of deposition on the conductive layer*, as recited in claim 1 of the present invention. Instead, in Jung, the second insulating layer 126 is formed without any consideration of selective deposition, e.g., different deposition rates depending the surface of the gate stack.

For these reasons, Jung does not teach or disclose such selective deposition of a liner on the capping nitride layer at a rate lower than the rate of deposition on the conductive layer, as recited in claim 1. The Examiner has already indicated that claim 7 is allowable based on the same limitations.

Thus, Jung does not teach all of the limitations of claim 1 and Jung does not anticipate claim 1. Consequently, claim 1 is allowable. Also, claims 2 and 5, which depend from claim 1 and recite features that are neither taught nor disclosed in the cited references, are also allowable.

Claim 6 is amended to recite, “selectively depositing a liner directly on the conductive layer and on the capping nitride layer, so that the liner is thicker on the conductive layer than on the capping nitride layer.”

In contrast, in Jung, a liner 40 is not formed directly on the conductive layer and on the capping nitride layer, but on the spacers 124. Thus, claim 6 is allowable. Also, claims 8-11, which depend from claim 6 and recite features that are neither taught nor disclosed in the cited references, are also allowable.

Allowable claim 7 is rewritten in independent form as new claim 22. Dependent claims 23, 24, 25, and 26 are added, copied from original claims 3, 4, 8 and 9, respectively.

Claim 12 is amended to recite, “selectively depositing a liner over the gate stacks, so that the liner is thicker on the conductive layer than on the capping nitride layer, having a step along the boundary of the capping nitride layer and the conductive layer.” Support for these amendments are found in Figure 3 and the accompanying text.

Nowhere does Jung teaches or suggests this aspect of the claimed invention recited in claim 12. Thus, claim 12 is allowable. Also, claims 13-14, which depend from claim 6 and recite features that are neither taught nor disclosed in the cited references, are allowable.

Similarly, with respect to claim 15, Jung does not teach or disclose, “the thickness of the nitride layer having a *transition* adjacent a boundary between the conductive layer and the capping nitride layer.” Thus, claim 15 is allowable.

Claim 16 is amended to recite, “a liner selectively deposited overlying opposing sidewalls of the gate stacks, the liner being thinner on the capping nitride layer than on the conductive layer, the liner having a step along the boundary of the capping nitride layer and the conductive layer,” which is similar to the above limitations of claim 12. For the reasons discussed above, claim 16 is allowable. Also, claims 17-20, which depend from claim 16 and recite features that are neither taught nor disclosed in the cited references, are allowable.

Further, according to an embodiment of the present invention, which is described, for example, at page 3, lines 3-9, such selective deposition is enabled by using different surface characteristics of the area to be deposited, i.e., the multi-layer gate stack. New claim 21 is added to further clarify this aspect of the claimed invention. Thus, for the reasons discussed above, claim 21 is allowable.

Claim Rejections – 35 USC § 103

Claim 14 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Jung. The rejection is respectfully traversed.

As discussed above with reference with claim 12, Jung does not teach or disclose, “the liner having a step along the boundary of the capping nitride layer and the conductive layer.” Thus, for the reasons discussed above, claim 14, which depends from claim 12, is allowable.

CONCLUSION

For the foregoing reasons, reconsideration and allowance of claims 1-26 of the application as amended is solicited. The Examiner is encouraged to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

Respectfully submitted,

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